

WHAT IS CLAIMED IS:

1. An image display control system comprising a supply source for transmitting a signal including at least a video signal, and an image display for receiving the signal from said supply source and displaying a corresponding image,

said supply source including:

characteristic acquisition means for acquiring characteristic data of said image display when said supply source is powered on;

determination means for determining a signal communication specification with said image display on the basis of the characteristic data acquired by said characteristic acquisition means; and

communication means for communicating a signal including the video signal with the communication specification determined by said determination means, and

said image display including:

characteristic transmission means for transmitting characteristic data for specifying a characteristic of said image display to said supply source; and

display communication means for communicating the signal including the video signal determined by said determination means of said supply source.

2. The system according to claim 1, wherein said characteristic acquisition means comprises:

characteristic request means for transmitting a  
5 characteristic data transmission request to said image display;

detection means for detecting a connection request including characteristic data from said image display; and

10 characteristic detection means for detecting the characteristic data sent back from said image display, and

said image display comprises:

connection request transmission means for  
15 transmitting a connection request including characteristic data of said image display to said supply source; and

characteristic transmission means for transmitting characteristic data of said image display in  
20 correspondence with a characteristic data transmission request from said supply source.

3. The system according to claim 2, wherein said characteristic request means stops transmitting the  
25 characteristic data transmission request when no characteristic data is sent back from said image display

even upon transmitting the characteristic data transmission request a predetermined number of times after said supply source is powered on.

5     4.     The system according to claim 2, wherein said connection request transmission means monitors detection of the characteristic data transmission request from said supply source when no characteristic data transmission request is sent back from said supply  
10 source even upon transmitting the connection request a predetermined number of times after said image display is powered on.

5.     The system according to claim 2, wherein  
15     the characteristic data transmission request from said characteristic request means includes a specification information transmission request of said image display, and  
       said image display sends back specification  
20 information of said image display in correspondence with the specification information transmission request (S39).

6.     The system according to claim 2, wherein  
       the characteristic data transmission request from  
25 said characteristic request means includes an adjustment information transmission request of said image display,

and

said image display sends back adjustment information of said image display in correspondence with the adjustment information transmission request.

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7. The system according to claim 1, wherein said determination means specifies a display screen size of said image display from the characteristic data , obtains a video signal amount to be transmitted in  
10 correspondence with the specified display screen size, and determines a signal communication specification.

8. The system according to claim 1, wherein the signal communication specification determined by said  
15 determination means includes a vertical synchronization period, a horizontal synchronization period, and a video signal transmission clock period for transmitting a video signal.

20 9. The system according to claim 1, wherein the characteristic data of said image display includes at least any one of

the number of pixels and pixel layout of a display device of said image display,

25 an emission characteristic of said display device of said image display,

a gray level characteristic of said image display  
(the number of gray levels and a gamma characteristic of  
said display device),

the type of image display (a screen size, an  
5 aspect ratio, and the type of device),

a specification of an audio playback system of  
said image display, and

a displayable frame frequency of said image  
display.

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10. An image display system control method in an image  
display control system having a supply source for  
transmitting a signal including at least a video signal,  
and an image display for receiving the signal from the  
15 supply source and displaying a corresponding image,  
comprising:

the characteristic acquisition step of acquiring  
characteristic data of the image display when the supply  
source is powered on;

20 the determination step of determining a signal  
communication specification with the image display on  
the basis of the characteristic data acquired in the  
characteristic acquisition step;

the communication step of communicating a signal  
25 including the video signal with the communication  
specification determined in the determination step, the

characteristic acquisition step, the determination step,  
and the communication step being executed in the supply  
source;

the characteristic transmission step of  
5 transmitting characteristic data for specifying a  
characteristic of the image display to the supply  
source; and

the display communication step of communicating  
the signal including the video signal determined in the  
10 determination step of the supply source, the  
characteristic transmission step and the display  
communication step being executed in the image display.

11. The method according to claim 10, wherein the  
15 characteristic acquisition step comprises:

the characteristic request step of transmitting a  
characteristic data transmission request to the image  
display;

the detection step of detecting a connection  
20 request including characteristic data from the image  
display; and

the characteristic detection step of detecting the  
characteristic data sent back from the image display,  
and

25 the method further comprises:

the connection request transmission step of

transmitting a connection request including  
characteristic data of the image display to the supply  
source; and

the characteristic transmission step of  
5 transmitting characteristic data of the image display in  
correspondence with a characteristic data transmission  
request from the supply source, the connection request  
transmission step and the characteristic transmission  
step being executed in the image display.

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12. The method according to claim 11, wherein the  
characteristic request step comprises stopping  
transmitting the characteristic data transmission  
request when no characteristic data is sent back from  
15 the image display even upon transmitting the  
characteristic data transmission request a predetermined  
number of times after the supply source is powered on.

13. The method according to claim 11, wherein the  
20 connection request transmission step comprises  
monitoring detection of the characteristic data  
transmission request from the supply source when no  
characteristic data transmission request is sent back  
from the supply source even upon transmitting the  
25 connection request a predetermined number of times after  
the image display is powered on.

14. The method according to claim 11, wherein  
the characteristic data transmission request in  
the characteristic request step includes a specification  
5 information transmission request of the image display,  
and  
the image display sends back specification  
information of the image display in correspondence with  
the specification information transmission request.  
10
15. The method according to claim 11, wherein  
the characteristic data transmission request in  
the characteristic request step includes an adjustment  
information transmission request of the image display,  
15 and  
the image display sends back adjustment  
information of the image display in correspondence with  
the adjustment information transmission request.
- 20 16. The method according to claim 10, wherein the  
determination step comprises specifying a display screen  
size of the image display from the characteristic data,  
obtaining a video signal amount to be transmitted in  
correspondence with the specified display screen size,  
25 and determining a signal communication specification.



17. The method according to claim 10, wherein the signal communication specification determined in the determination step includes a vertical synchronization period, a horizontal synchronization period, and a video  
5 signal transmission clock period for transmitting a video signal.

18. The method according to claim 10, wherein the characteristic data of the image display includes at  
10 least any one of

- the number of pixels and pixel layout of a display device of the image display,
- an emission characteristic of the display device of the image display,
- 15 a gray level characteristic of the image display (the number of gray levels and a gamma characteristic of the display device),
- the type of image display (a screen size, an aspect ratio, and the type of device),
- 20 a specification of an audio playback system of the image display, and
- a displayable frame frequency of the image display.

19. A computer program product which operates on an  
25 image display control system having a supply source for transmitting a signal including at least a video signal,

and an image display for receiving the signal from the supply source and displaying a corresponding image, comprising codes of:

the characteristic acquisition step of acquiring  
5 characteristic data of the image display when the supply source is powered on;

the determination step of determining a signal communication specification with the image display on the basis of the characteristic data acquired in the  
10 characteristic acquisition step;

the communication step of communicating a signal including the video signal with the communication specification determined in the determination step, the characteristic acquisition step, the determination step,  
15 and the communication step being executed in the supply source;

the characteristic transmission step of transmitting characteristic data for specifying a characteristic of the image display to the supply  
20 source; and

the display communication step of communicating the signal including the video signal determined in the determination step of the supply source, the characteristic transmission step and the display  
25 communication step being executed in the image display.

20. A computer-readable storage medium which stores a computer program operating on an image display control system having a supply source for transmitting a signal including at least a video signal, and an image display  
5 for receiving the signal from the supply source and displaying a corresponding image, the computer program comprising codes of:

the characteristic acquisition step of acquiring characteristic data of the image display when the supply  
10 source is powered on;

the determination step of determining a signal communication specification with the image display on the basis of the characteristic data acquired in the characteristic acquisition step;

15 the communication step of communicating a signal including the video signal with the communication specification determined in the determination step, the characteristic acquisition step, the determination step, and the communication step being executed in the supply  
20 source;

the characteristic transmission step of transmitting characteristic data for specifying a characteristic of the image display to the supply source; and

25 the display communication step of communicating the signal including the video signal determined in the

determination step of the supply source, the characteristic transmission step and the display communication step being executed in the image display.

5 21. An image display control system comprising a terminal for transmitting a signal including at least a pair of video and acoustic signals, and an image display for receiving the signal from said terminal and displaying a corresponding image,

10 said terminal including:

request means for detecting a program specification held in said image display upon powering on said terminal, and when program download is determined to be necessary from the detected program specification, requesting program download of said image display; and

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program download means for downloading a program, and

said image display including:

20 program update means for storing, in a corresponding program memory of said image display, the downloaded program transmitted subsequently upon reception of the program download request.

25 22. The system according to claim 21, wherein said request means acquires a program ID stored in the

program memory of said image display, and detects a program specification.

23. The system according to claim 21, wherein when  
5 said request means determines that program download is unnecessary and upon completion of program download, said terminal performs display control for said image display.

10 24. An image display system control method in an image display control system having a terminal for transmitting a signal including at least a pair of video and acoustic signals, and an image display for receiving the signal from the terminal and displaying a  
15 corresponding image, comprising:

the detection step of detecting a program specification held in the image display when the terminal is powered on;

the determination step of determining whether  
20 program download is necessary from the program specification detected in the detection step;

the request step of requesting program download of the image display in correspondence with a determination result in the determination step;

25 the program download step of downloading a program, the detection step, the determination step, the request

step, and the program download step being executed in the terminal; and

the program update step of storing, in a corresponding program memory of the image display, the downloaded program transmitted subsequently upon  
5 reception of the program download request, the program update step being executed in the image display.

25. The method according to claim 24, wherein the  
10 detection step comprises acquiring a program ID stored in the program memory of the image display, and detecting a program specification.

26. The method according to claim 24, wherein when  
15 program download is determined in the determination step to be unnecessary and upon completion of program download, the terminal performs display control for the image display.

20 27. A computer program product which operates on an image display control system having a terminal for transmitting a signal including at least a pair of video and acoustic signals, and an image display for receiving the signal from the terminal and displaying a  
25 corresponding image, comprising codes of:

the detection step of detecting a program

specification held in the image display when the terminal is powered on;

the determination step of determining whether program download is necessary from the program

5 specification detected in the detection step;

the request step of requesting program download of the image display in correspondence with a determination result in the determination step;

the program download step of downloading a program,  
10 the detection step, the determination step, the request step, and the program download step being executed in the terminal; and

the program update step of storing, in a corresponding program memory of the image display, the  
15 downloaded program transmitted subsequently upon reception of the program download request, the program update step being executed in the image display.

28. A computer-readable storage medium which stores a  
20 computer program operating on an image display control system having a terminal for transmitting a signal including at least a pair of video and acoustic signals, and an image display for receiving the signal from the terminal and displaying a corresponding image, the  
25 computer program comprising codes of:

the detection step of detecting a program

specification held in the image display when the terminal is powered on;

the determination step of determining whether program download is necessary from the program

5 specification detected in the detection step;

the request step of requesting program download of the image display in correspondence with a determination result in the determination step;

the program download step of downloading a program,  
10 the detection step, the determination step, the request step, and the program download step being executed in the terminal; and

the program update step of storing, in a corresponding program memory of the image display, the  
15 downloaded program transmitted subsequently upon reception of the program download request, the program update step being executed in the image display.